CLAIMS

What is claimed is:

1.   A method of transmitting multimedia data over a wireless local area network (WLAN), the method comprising:

receiving a request for a multimedia resource from a predetermined requesting device connected to the WLAN, during a distributed coordination function (DCF) period when a right to use a network channel is distributed through contention; and

unilaterally transmitting the requested multimedia resource to the predetermined receiving device during a multimedia point coordination function (mPCF) period when a right to use a network channel is distributed to the predetermined requesting device in a centralized manner.

2.   The method of claim 1, wherein the unilateral transmitting during the mPCF comprises determining how much of the requested multimedia resource will be transmitted and determining a transmission schedule depending upon a type of the requested multimedia resource.

3.   The method of claim 1, wherein the request for multimedia resource specifies a method of transmitting an acknowledgement signal, and the unilateral transmitting transmits the requested multimedia resource according to the method of transmitting the acknowledgement signal.

4.   The method of claim 3, further comprising:

receiving the acknowledgement signal from the predetermined requesting device for each multimedia resource data unilaterally transmitted to the predetermined requesting device, if the method of transmitting the acknowledgement signal is a data acknowledgement transmission method, and

receiving an acknowledgement signal from the predetermined requesting device for every predetermined number of multimedia resource data unilaterally transmitted to the predetermined requesting device, if the method of transmitting the acknowledgement signal is burst acknowledgement transmission method.

5.   A method of transmitting multimedia data over a wireless local area network (WLAN), the method comprising:

receiving a request for a multimedia resource from a predetermined requesting device connected to the WLAN;

scheduling the received request for the multimedia resource; and

transmitting the requested multimedia resource to the predetermined requesting device during a multimedia point coordination function (mPCF) period based on the scheduling.

6.   The method of claim 5, wherein the transmitting comprises determining how much of the requested multimedia resource will be transmitted depending upon a type of the requested multimedia resource.

7.   The method of claim 5, wherein in the scheduling, the requested multimedia resource is scheduled based on a priority level of the requested multimedia resource.

8.   The method of claim 7, wherein as the requested multimedia data, control data ranks first in terms of priority, followed by motion picture experts group (MPEG) data and video on demand data.

9.   The method of claim 5, wherein in the scheduling, if there is no available network band for the requested multimedia resource, a request for allocation of a network band to the requested multimedia resource is denied.

10.   The method of claim 9, wherein the requested multimedia resource that is denied band allocation, is transmitted during a distributed coordination function (DCF) period.

11.   A method of transmitting multimedia data over a wireless local area network (WLAN), the method comprising:

receiving a request for a multimedia resource;

dynamically allotting a predetermined length of a multimedia point coordination function (mPCF) period, during which the requested multimedia resource will be transmitted according to an amount of the requested multimedia resource; and

transmitting the requested multimedia resource during the allotted mPCF period.

12.   A method of guaranteeing a full length of a point coordination function (PCF) period in a wireless local area network (WLAN), the method comprising:

monitoring a distributed coordination function (DCF) beacon delay; and

adjusting a PCF period value, if the DCF beacon delay occurs according to the monitoring.

13.   A machine readable storage storing at least one program controlling a wireless transmitter to provide a wireless local area network (WLAN) multimedia point coordinator according to a process comprising:

receiving a request for a multimedia resource from a predetermined requesting device connected to the WLAN, during a distributed coordination function (DCF) period when a right to use a wireless network channel is distributed through contention; and

unilaterally transmitting the requested multimedia resource to the predetermined requesting device during a multimedia point coordination function (mPCF) period when a right to use a wireless network channel is distributed in a centralized manner.

14.   The storage of claim 13 wherein the multimedia point coordinator process further comprises scheduling the received request for the multimedia resource and transmitting the requested multimedia resource to the predetermined requesting device during the mPCF period according to the scheduling.

15.   The storage of claim 14, wherein the scheduling determines how much of the requested multimedia resource will be transmitted or determines a transmission schedule of the requested multimedia resource, according to a type of the requested multimedia resource by referring to a stored priority table.

16. The storage of claim 15, wherein in the stored priority table, as the multimedia resource, control data ranks first in terms of priority, followed by motion picture experts group (MPEG) data and video on demand (VOD) data.

17. The storage of claim 14, wherein the scheduling comprises denying a request for allocation of the network channel to the requested multimedia resource if there is no available network channel for the requested multimedia resource.

18. The storage of claim 14, wherein the scheduling comprises dynamically allotting a predetermined length of the mPCF period, during which the requested multimedia resource will be transmitted, according to an amount of the requested multimedia resource.

19. The storage of claim 13, wherein the multimedia point coordinator process further comprises monitoring a DCF beacon delay and adjusting an mPCF period value according to the monitoring, if the monitoring determines a DCF beacon delay occurrence.

20. A wireless local area network television set top box in communication with multimedia sources, comprising:
a programmed computer processor receiving a request for a multimedia resource from a predetermined requesting device connected to the WLAN, during a distributed coordination function (DCF) period when a right to use a network channel is distributed through contention, and unilaterally transmitting the requested multimedia resource to the predetermined requesting device during a multimedia point coordination function (mPCF) period when a right to use a network channel is distributed to the predetermined requesting device in a centralized manner.

21. The set top box of claim 20, wherein the multimedia resource is multimedia data, including high definition television level data, from one or more of Internet, satellite, antenna, and cable.

22. A home wireless local area network (WLAN) system, comprising:
a plurality of WLAN computing stations;

a home server on the WLAN and comprising a programmed computer processor controlling the server according to a process comprising:

receiving a request for a multimedia resource from any one of the stations connected to the WLAN, during a distributed coordination function (DCF) period when a right to use a network channel is distributed through contention, and

unilaterally transmitting the requested multimedia resource to the stations according to a transmission schedule during a multimedia point coordination function (mPCF) period when a right to use a network channel is distributed to each requesting station in a centralized manner.

23.   The system of claim 22, wherein the WLAN computing stations are any one of standard television stations, standard high definition television stations, personal computers, and computing appliances.

24.   The system of claim 22, wherein the home server presents a user interface to set a priority level of a type of the multimedia resource and the programmed computer processor schedules the unilateral transmitting according to the set priority level.